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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/085,911	02/28/2002	Kevin Lee	035451-0180 (3728.Palm)	1793

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EXAMINER	
ABDULSELAM, ABBAS I	
ART UNIT	**PAPER NUMBER**
2674	

DATE MAILED: 05/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/085,911	KEVIN ET AL.	
	Examiner	Art Unit	
	Abbas I Abdulselam	2674	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 12/21/04 have been fully considered but they are not persuasive.

Applicant argues that the references, Kim (USPN 6262785), kung (USPN 6567101), and Makela et al. (USPN 6047196) alone or in combination do not teach a sensor coupled to the processor such that the sensor is configured to provide a signal representative of the size of the display. However, referring Fig. 23, Kim teaches a drive system enabling the display of a single image on a first and a second liquid crystal panels (301, 321). Kim described the display in terms of a split matrix method, which is used to drive the first and the second liquid crystal panels (301, 321), with a division being made at the point where same are separated. See col. 8, lines 33-41. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize Kims's split matrix with respect to division point for the purpose of producing a signal for representing a boundary of each of the display panels (301, 321). In addition, Kung teaches positional sensors detecting changes in the orientation of the digital information appliance with respect to its surrounding environment. Applicant argues that the cited references alone or in combination do not teach an expandable display in which the display is viewable by a user in both the first size and the second size configurations. However, as shown in fig. 23, Kim teaches display panels (301, 321) with respect to a wire (345) which is flexible and enables folding and spreading apart of the displays. In addition, Makela teaches as shown in Fig. 5 a large display (12) of a device comprising two sections, whereby one obtains a total display area, which corresponds to about twice

the cross section of the folded device. See col. 7, lines 55-65. With respect to independent claims 14 and 18, as amended, applicant argues that that the cited references do not teach physically resizing a display to a second size configuration. However, as discussed earlier, Kim teaches the display in terms of a split matrix method which is used to drive the first and the second liquid crystal panels (301, 321), with a division being made at the point where same are separated as shown in Fig. 23.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 6 and 18-19, rejected under 35 U.S.C. 103(a) as being unpatentable over Kim (USPN 6262785) in view Kung (USPN 6567101) Makela et al. (USPN 6047196).

Regarding claims 1 and 18, Kim teaches a portable display device in a fully expanded state. Kim discloses that the device comprises a main body (101), an extension portion (103), a first LCD section (107), a second LCD section (109) such that the extension portion (103) can be fully expanded in order that the same is substantially on the same plane with the main body (101), or folded completely over the main body (101). See col. 2, lines 60-67 and col. 3, lines 1-10. Kim discloses that the sliding bars (113) of

the LCD section (107) fitted into the slide groves (115) of the main body (101) such that the LCD section (107) is able to slide in a longitudal direction of the main body (101) (col. 3, lines 50-63, and Fig. (3-5). Kim further teaches a hinge connection (col. 3, line 1) and a slide grip (117), which is manipulated by the user to control the sliding of both LCD sections (107, 109). See col. 3, lines 64-67 and Fig. 2. However, Kim does not teach a sensor coupled to the processor such that the sensor is configured to provide a signal representative of the size of the display. Kung teaches as illustrated in FIG. 9A, the arrowhead F representing a point at which the control pen (120) presses the sensing plate (102). Kung discloses as illustrated in FIG. 9B, when a light pressure is exerted on the sensing plate (102) by the control pen (120), the image at the touch point (122) is zoomed in and is displayed inside a small variable display frame (182) that is expanded from the touch point 122. Kung further indicates as illustrated in FIG. 9C, when a greater pressure is exerted on the sensing plate (102) by the control pen (120), the image at the touch point (122) is zoomed in and displayed inside a larger variable display frame (182) that is expanded from the touch point (122).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kim's portable display device to adapt Kung's sensation of expansion of the display screen. One would have been motivated in view of the suggestion in Kung that the sensing plate (102) is functionally equivalent to the desired sensor. The use of a sensing plate helps detect the expansion of the display screen as taught by Kung.

Kim does not teach an expandable display such that the display is being viewable by a user in both the first size and second size configurations. Makela on the other hand

teaches a large display (12) of a device comprising two sections, whereby one obtains a total display area, which corresponds to about twice the cross section of the folded device. See col. 7, lines 55-65 and Fig. 5. As shown on Fig. 5, Makela illustrates a display (9) on folded position, and a larger display (12) on unfolded position.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kim's portable display device to adapt Makela's displayable feature on folded and unfolded positions. One would have been motivated in view of the suggestion in Makela displaying on folded (9) and unfolded position (12) as illustrated on Fig. 5. equivalently yields the desired "viewable display on both the first and second size configurations". The use of display on folded and unfolded positions helps function a portable communication device with two modes of operation as taught by Makela.

Regarding claims 6 and 19, Kim teaches means for securely maintaining the extension portion (103) in a state of folded over the main body (101). See col. 3, lines 19-22.

3. Claims 7-8 and 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of kung, Makela and in further view of Macuka (USPN 4171585).

Regarding claim 8, Macuka teaches a display device (Fig. 1) and detail view of a roller holder (Fig. 4) including slidable slots (121, 123). It would have been obvious an aperture can be arranged and it is matter of design analogous to the slots.

Kim as modified has been described above. However, Kim does not teach expandable display that includes a rollable display. Macuka on the other hand teaches an

improved roll display device including a pair of roll mounting members (3) carried by a frame (5), which is extendable and mounted to a frame support (7). See col. 2, lines 28-32 and Fig. 1.

Therefore, it would have been obvious to one having skill in the art at the time the invention was made to modify Kim's modified display system to adapt Macuka's rollable structure. One would have been motivated in view of the suggestion in Macuka the rollable structure as configured in Fig. 1 is the same as the desired rollable display. The use of rollable structure helps function a roll display device as taught by Macuka.

4. Claims 2-5, 14-17 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of kung, Makela and Kung et al. (USPN 6570583).

Regarding claims 14 and 26, Kim, Kung and Makela have been discussed. In addition, Kim teaches a slide grip (117) which is manipulated by the user to control the sliding of LCDs (107, 109). See col. 3, lines 64-67. It would have been obvious that the slide grip can be used to achieve the desired resizing.

However, Kim does not teach a means of reformatting a displayed image. Kung on the other hand teaches a display program (37) processing a zoom in, zoom out and key signals (col. 3, lines 22-24). Referring to Fig. 3 and Fig. 5, Kung et al. show a display program (37) determining the contents of the display (34), which must be scrolled down and reformatted to display a new line of information (32). See col. 3, lines 32-39.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was to modify Kim's portable display system to incorporate Kung's

display program (37). One would have been motivated in view of the suggestion in Kung that the display program (37) equivalently provides the desired reformatting of the displayed image. The use of a display program (37) helps function a handheld display device as taught by Kung et al.

Regarding claim 2, see Kung et al's Fig. 4 (37).

Regarding claims 3, 15-16 and 27-28, Kung et al. teach that by rotating the zoom control knob (48) backwards, zoom out signals are sent causing the display program (37) to reduce the size of the font enabling more lines of information (32) to be shown on the display (34).

Regarding claims 4-5, 17, and 29, Kung et al. teach that the user can rotate the zoom control knob (48) forward to zoom in on the contents of the display (34) making the information larger on the screen and hence displaying less information. It would have been obvious that neither zoon in not zoom out would bring change and hence would leave the same information.

5. Claims 9-13 and 21-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim in view of kung, Makela and in further view of Petrich (USPN 6104379).

Kim as modified has been discussed above. However, Kim does not teach the size of display with respect to a sensor, the type of which includes a hinge sensor, electro-textile sensor, an electrical sensor and optical sensor. Petrich on the other teaches a hand sensing joint-link devices with a monitor (104) displaying graphical representation (105)

as shown in Fig. 1A. Petrich discloses that the joint may be modified to accommodate the physical and optical, electrical, magnetic or other sensing phenomena required to detect articulation of the joint. See col. 17, lines 46-53.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Kim's portable display system to include Petriche's use of a variety of sensors. One would have been motivated in view of the suggestion in Petrich that the use of optical, magnetic electrical and other sensors equivalently satisfy the desired optical, magnetic, electrical, hinge and electro-textile sensors. The use of a variety of sensors helps function a display system with hand sensing device as taught by Petrich et al.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abbas I Abdulselam whose telephone number is (571) 272-7685. The examiner can normally be reached on Monday through Friday from 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abbas Abdulselam

Examiner

Art Unit 2674

May 10, 2005

XIAO WU
PRIMARY EXAMINER